If you are using a printed copy of this procedure, and not the on-screen version, then you <u>MUST</u> make sure the dates at the bottom of the printed copy and the on-screen version match.

The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.

Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ

Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.120.3.e 4 O'CLOCK (PEER 9) MODE 25 TESTS FROM LOCAL PANEL

C-A-OPM Procedures in which this Attachment is used.						
	dures in which this A					

Hand Processed Changes

HPC No.	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>	
	Approved:	Signature on File		_
		ollider-Accelerator Departm	ent Chairman	Date

V. Castillo

4.120.3.e 4 O'CLOCK (PEER 9) MODE 25 TESTS FROM LOCAL PANEL

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title:	Checksum:
Division B Software Filename and Checksum: Title:	Checksum:
<u>Initial testing complete</u> :	
Test Team Leader's Name (Print):	Life Number:
Test Team Leader's Name (Sign):	Date://
Acceptance test procedure complete (following repairs and retesting if required):	
Test Team Leader's Name (Print):	Life Number:
Test Team Leader's Name (Sign):	Date://
Test results reviewed by:	
Safety Section Head's Name (Print):	Life Number:
Salety Section 12th of Lumb (11th)	2101 (dilloci =
Safety Section Head's Name (Sign):	Date://
Test results accepted by Radiation Safety Committee:	
RSC Member's Name (Print):	Life Number:
RSC Member's Name (Sign):	Date://

2

1.1 Confirm proper response of a Critical Device Enable in Mode 25 to a Key release:

At the Local Control Panel in the RF control room in 1004A: \square PLACE PEER 9 in No Access (MODE 25). **□** VERIFY that the local control panel indicates that PEER 9 is in **MODE 25 □** VERIFY RF CD#1 READBACK OK lamp on the local control panel is **OFF** RF CD#2 READBACK OK lamp on the local control panel is **□** VERIFY **OFF □** VERIFY Circuit Breaker of RF Cavity PS is ON Push Button simulating Enable for RF Cavity PS Push & Hold **TURN** Key in Local Panel to **OFF □** VERIFY **PEER 9** is in (Safe Mode) MODE 1 **□** VERIFY Circuit Breaker for RF Cavity PS HV drops OUT NG Hware light is □ VERIFY ON NG Hware from PLC RESET □ VERIFY NG Hware light is **OFF**

CONDUCT	Above Test Sequence following table below
---------	--

RF Cavity PS	Verify Peer 9 in Mode 25	Push & Hold	Turn LP Key	Verify Peer 9 goes to Mode	Verify Ckt Bkr pops	Verify NG Hware light On	Rel. Push Buttn	Do PLC reset of NG Hware	Verify NG Hware light Off	Go to Mode 25 & next test
YO4 - CAVA3.1		A1-00								
B14 - CAVA3.2		A1-03								
B14 – CAVS3.1		A1-07								
G4 – CAVSX3		A1-14								
Y04 - CAVA3.2		B2-01								
B14 – CAVS3.3		B2-11								
Y04 – CAVS3.2		B2-05								
G4 – CAVSX2		B2-13								
Y04 - CAVS3.1		A2-04								
B14 – CAVS3.2		A2-10								
G4 – CAVSX1		A2-12								
Y04 - CAVS3.3		B1-06								
B14 - CAVA3.1		B1-02								
G4 – CAVSX4		B1-15								End of Test

[☐] Check for Acceptance of Confirm proper response of a Critical Device Enable in Mode 25 to a Key release

CAVA3.1wit	th tied-in B14-Landau, to a Critical Device Enable in Mode 25 a	and a Key release.
At the Local (Control Panel in the RF control room in 1004A:	
PLACE	PEER 9 in No Access (MODE 25).	
VERIFY	that the local control panel indicates that PEER 9 is in	MODE 25
VERIFY	RF CD#1 READBACK OK lamp on the local control panel is	OFF
VERIFY	RF CD#2 READBACK OK lamp on the local control panel is	OFF
VERIFY	Circuit Breaker of RF Cavity PS is	ON
Push & Hold	Push Button simulating On Status for RF Cavity PS	
TURN	Key in Local Panel to	OFF
VERIFY	PEER 9 is in (Safe Mode)	MODE 1
VERIFY	Circuit Breaker for RF Cavity PS HV drops	OFF
VERIFY	NG Hware light is	ON
RESET	NG Hware from PLC	

Confirm the Reachback response of Power Supplies: Y04-CAVA3.1 with tied-in Y04-Landau, and B14-

CONDUCT Above **Test Sequence** following table below

NG Hware light is

RF Cavity PS	Verify Peer 9 in Mode 25	Push & Hold	Turn LP Key	Verify Peer 9 goes to Mode 1	Verify Ckt Bkr pops	Verify NG Hware light On	Rel. Push Buttn	Do PLC reset of NG Hware	Verify NG Hware light Off	Go to Mode 25 & next test
YO4 – CAVA3.1		A1-00								
B14 – CAVA3.1		A1-07								

[□] Check for Acceptance of Confirm the Reachback response of Power Supplies: Y04-CAVA3.1 with tied-in Y04-Landau, and B14-CAVA3.1 with tied-in B14-Landau, to a Critical Device Enable in Mode 25 and a Key release

1.2

VERIFY

OFF

	PLACE VERIFY	PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in	MODE 25
	VERIFY		OFF
Ш	VERIF 1	LCP sees CD#1 light \square and CD#2 light \square go	Off
	WAIT	Beam Imminent Alarm to stop sounding	
	PULL	Any Crash Operator: # in Zone 4Z1	
	VERIFY	LCP sees PEER 9 goes to	MODE 1
	VERIFY	LCP sees CD#1 light □ and CD#2 light □	ON
	REARM	Crash Operator	
	RESET	Crash at LCP	
	VERIFY	Crash	RESET
	PLACE	PEER 9 in Restricted Access (MODE 9).	
	VERIFY	LCP sees PEER 9 is in	MODE 9
Tes		otance of Test that a Crash Operator forces the system from Mode 25 sh Operator stops the Beam Imminent Alarm from sounding and force ode 1.	
Tes N	st that a Cras Mode 25 to M PLACE	sh Operator stops the Beam Imminent Alarm from sounding and forcode 1. PEER 9 in No Access (MODE 25).	es the system fr
Tes N	st that a Cras Mode 25 to M	sh Operator stops the Beam Imminent Alarm from sounding and forcede 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in	
Tes N	st that a Cras Mode 25 to M PLACE VERIFY	sh Operator stops the Beam Imminent Alarm from sounding and forcode 1. PEER 9 in No Access (MODE 25).	es the system fr MODE 25
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY	Sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding	es the system fr MODE 25 OFF
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL	sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is	es the system fr MODE 25 OFF
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL VERIFY	Sh Operator stops the Beam Imminent Alarm from sounding and force ode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding Alarm stops LCP sees PEER 9 goes to	es the system fr MODE 25 OFF
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL VERIFY VERIFY VERIFY VERIFY	Sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding Alarm stops LCP sees PEER 9 goes to LCP sees CD#1 light and CD#2 light go	es the system fr MODE 25 OFF SOUNDING MODE 1
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL VERIFY VERIFY	Sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding Alarm stops LCP sees PEER 9 goes to LCP sees CD#1 light and CD#2 light go Crash Operator	es the system fr MODE 25 OFF SOUNDING MODE 1
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL VERIFY VERIFY VERIFY VERIFY REARM	Sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding Alarm stops LCP sees PEER 9 goes to LCP sees CD#1 light and CD#2 light go	es the system fr MODE 25 OFF SOUNDING MODE 1
Tes N	st that a Cras Mode 25 to M PLACE VERIFY VERIFY PULL VERIFY VERIFY VERIFY VERIFY REARM RESET	Sh Operator stops the Beam Imminent Alarm from sounding and force fode 1. PEER 9 in No Access (MODE 25). LCP sees PEER 9 is in LCP sees CD#1 light and CD#2 light go Any Crash Operator: # in Zone 4Z1 while Alarm is sounding Alarm stops LCP sees PEER 9 goes to LCP sees CD#1 light and CD#2 light go Crash Operator Crash at LCP	es the system fr MODE 25 OFF SOUNDING MODE 1 ON

1.5	T	Cest status of	No Access and RF Hazard gate lights in Mode 25.	
		PLACE VERIFY RESET	Peer 9 in Controlled Access (Mode 18) LCP sees Peer 9 is in Controlled Access Gates:	MODE 18
		FORCE	Zone 4Z1	
		SWEEP VERIFY	LCP sees Zone 4Z1	SWEPT
		VERIFY VERIFY VERIFY VERIFY	Red No Access light at gate 4GE1 is Red RF Hazard light at gate 4GE1 is Red No Access light at gate 4GE2 is Red RF Hazard light at gate 4GE2 is	OFF OFF OFF
		VERIFY VERIFY	Red RF Hazard light at gate 3GI1 is Red RF Hazard light at gate 4GI1 is	OFF OFF
		PLACE VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9: A Div □, B Div □ in No Access	MODE 25
		VERIFY	Time secs for RF Imminent Alarms to stop sounding	
		VERIFY VERIFY VERIFY VERIFY VERIFY	Red No Access light at gate 4GE1 is Red RF Hazard light at gate 4GE1 is Red No Access light at gate 4GE2 is Red RF Hazard light at gate 4GE2 is Red RF Hazard light at gate 3GI1 is Red RF Hazard light at gate 4GI1 is	ON ON ON ON ON
		PLACE VERIFY	Peer 9 in Controlled Access (Mode 18) LCP sees Peer 9 is in Controlled Access	MODE 18
	C	heck for acce	eptance of Test status of No Access and RF Hazard gate lights in M	ode 25.
1.6	To		ocked and loss of sweep with gate openings in Mode 25.	
		PLACE	Peer 9 in No Access (Mode 25)	

 \Box **VERIFY**

WAIT

□ VERIFY

 \Box **VERIFY**

□ VERIFY

FOLLOW

MODE 25

OFF

OFF

 \mathbf{ON}

LCP sees Peer 9: A Div \square , B Div \square in No Access

LCP sees RF CD#1 light is

LCP sees RF CD#2 light is

Gate-opening tests in **Table** below

Zone 4Z1 **Sweep** light is

For 90 secs for RF Imminent Alarms to stop sounding

	Verify CD light is OFF		Verify	Verify attempt to open gate fail			Verify	Verify	Verify CD light is ON		Place
Gate	CD#1	CD# 2	Sweep light is ON	With Blue card	With #10 RF CA key	Open gate	Peer 9 goes to Mode 1	Sweep light is OFF	CD#1	CD#2	Peer 9 in Mode 25 & test next gate
3GI1											
4GE2											
4GI1											
4GE1											End of Test

☐ Check for Acceptance of Test gates are locked and loss of sweep with gate openings in Mode 25.

1.7 Test in Mode 25 Chipmunk C50 Rad and/or Failsafe trip, A or B separately, disables the Critical Devices.

	PLACE	Peer 9 in Safe Access (Mode 1)	
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	Chipmunk C50 is in good physical condition and is	CHIRPING
	VERIFY	LCP sees Rad light: A Div □, B Div □	OFF
	VERIFY	LCP sees NG Hware light: A Div □, B Div □	OFF
	DETACH	Cable from Chipmunk	
	VERIFY	LCP sees Rad light: A Div □, B Div □	ON
	VERIFY	LCP sees NG Hware light: A Div □, B Div □	ON
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY	LCP sees RF CD#2 light is	ON
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	RESET	Rad & NG Hware at PLC Cab	
	VERIFY	LCP sees Rad light: A Div □, B Div □	OFF
	VERIFY	LCP sees NG Hware light: A Div □, B Div □	OFF
	PLACE	Peer 9 in No Access (Mode 25)	
	VERIFY	LCP sees Peer 9: A Div \square , B Div \square in No Access	MODE 25
	WAIT	For 90 secs for RF Imminent Alarms to stop sounding	
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	ON
_		•	

	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	ON
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	ON
	PRESS	Div A Rad Trip on Test Box	
	VERIFY	LCP sees Div A Rad light is	ON
	VERIFY	LCP sees Peer 9 Div A No Access light	ON
	VERIFY	LCP sees Peer 9 Div B No Access light	ON
	VERIFY	LCP sees RF Haz Div A light is	OFF
	VERIFY	LCP sees RF Haz Div B light is	ON
	VERIFY	LCP sees RF CD#1 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY	RF CD Box Block B1 Output 0 is	ON
	VERIFY	LCP sees RF CD#2 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	ON
	RESET	Div A Rad Trip from PLC Cab	
	VERIFY	LCP sees Div A Rad light is	OFF
_		Ç	
	CYCLE	#16 Transfer Key (Turn OFF then ON)	
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY	LCP sees RF CD#2 light is	ON
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	PLACE	Peer 9 in No Access (Mode 25)	
	VERIFY	LCP sees Peer 9: A Div □, B Div □ in No Access	MODE 25
	WAIT	For 90 secs for RF Imminent Alarms to stop sounding	WAIT
_	Y/EDIEY/	I CD DE CD//11/1/	OFF
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	ON
	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	ON
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	ON
	DDEGG	D' D D I M' M (D	
_	PRESS	Div B Rad Trip on Test Box	ON
	VERIFY	LCP sees Div B Rad light is	ON ON
	VERIFY	LCP sees Peer 9 Div A No Access light	ON ON
	VERIFY	LCP sees Peer 9 Div B No Access light	ON
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	OFF
	VERIFY	LCP sees RF CD#1 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	OFF

	VERIFY	LCP sees RF CD#2 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	RESET VERIFY	Div B Rad Trip from PLC Cab	OFF
	VEKIF I	LCP sees Div B Rad light is	OFF
	CYCLE	#16 Transfer Key (Turn OFF then ON)	
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	LCP sees RF CD#2 light is	ON
	PLACE	Peer 9 in No Access (Mode 25)	
	VERIFY	LCP sees Peer 9: A Div □, B Div □ in No Access	MODE 25
	WAIT	For 90 secs for RF Imminent Alarms to stop sounding	WAIT
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	ON
_		<i>θ</i>	
	PRESS	Div A Failsafe on Test Box	
	VERIFY	LCP sees Div A NG HWare light is	ON
	VERIFY	LCP sees Peer 9 Div A No Access light	OFF
	VERIFY	LCP sees Peer 9 Div B No Access light	ON
	VERIFY	LCP sees RF Haz Div A light is	OFF
	VERIFY	LCP sees RF Haz Div B light is	ON
	VERIFY	LCP sees RF CD#1 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY	RF CD Box Block B1 Output 0 is	ON
	VERIFY	LCP sees RF CD#2 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	ON
_	RESET	Div A Failsafe from PLC Cab	OFF
	VERIFY	LCP sees Div A NG HWare light is	OFF
	CYCLE	#16 Transfer Key (Turn OFF then ON)	
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	LCP sees RF CD#2 light is	ON
	PLACE	Peer 9 in No Access (Mode 25)	
	VERIFY	LCP sees Peer 9: A Div □, B Div □ in No Access	MODE 25
	XX/ A T/ID	E. O. Company of the Delivery of the second	TAY A TITE
	WAIT	For 90 secs for RF Imminent Alarms to stop sounding	WAIT
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	ON
	PRESS	Div B Failsafe on Test Box	
	VERIFY	LCP sees Div B NG HWare light is	ON
	VERIFY	LCP sees Peer 9 Div A No Access light	ON
_			- - ·

	VERIFY	LCP sees Peer 9 Div B No Access light	OFF
	VERIFY	LCP sees RF Haz Div A light is	ON
	VERIFY	LCP sees RF Haz Div B light is	OFF
	VERIFY	LCP sees RF CD#1 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY	LCP sees RF CD#2 light remains	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	RESET	Div B Failsafe from PLC Cab	
	VERIFY	LCP sees Div B NG HWare light is	OFF
	CYCLE	#16 Transfer Key (Turn OFF then ON)	
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	LCP sees RF CD#2 light is	ON
	VEIGHT 1	Ect sees Ri CDn2 light is	OIV
	DETACH	Chipmunk Test Box from Cable	
	CONNECT	Chipmunk to Cable	
_	RESET	NG HWare & NG Hware at PLC Cab	CHIDDING
	VERIFY	Chipmunk is	CHIRPING
	VERIFY	LCP sees Rad light: A Div \Box , B Div \Box	OFF
	VERIFY	LCP sees NG Hware light: A Div \square , B Div \square	OFF
		disables the Critical Devices.	
Tes	st any 4XAS s	ensor ODH alarm changes Mode 25 to Mode 1 and disables the	Critical Devices.
Te	st any 4XAS s		Critical Devices.
Tes	-	ensor ODH alarm changes Mode 25 to Mode 1 and disables the	Critical Devices. ON
	PLACE	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25)	
	PLACE VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B	ON
	PLACE VERIFY VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B	ON ON
	PLACE VERIFY VERIFY VERIFY WAIT	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A \(\preceq \) and Div B \(\preceq \) LCP sees RF Haz light: Div A \(\preceq \) and Div B \(\preceq \) LCP sees NG Hware light: A Div \(\preceq \), B Div \(\preceq \) For 90 secs for RF Imminent Alarms to stop sounding	ON ON OFF
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is	ON ON OFF
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is	ON ON OFF OFF
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A \(\preceq \) and Div B \(\preceq \) LCP sees RF Haz light: Div A \(\preceq \) and Div B \(\preceq \) LCP sees NG Hware light: A Div \(\preceq \), B Div \(\preceq \) For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is	ON ON OFF OFF ON ON
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div B Div B Div CP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is	ON ON OFF ON ON OFF
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is	ON ON OFF ON ON OFF ON
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div B Div B Div CP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is	ON ON OFF ON ON OFF
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is	ON ON OFF ON ON OFF ON
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY VERIFY CHOOSE JUMP	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div B Div Sees NG Hware light: A Div B Div LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is RF CD Box Block A1 Output 1 is RF CD Box Block B1 Output 1 is RF CD Box Block B1 Output 1 is RF CD Box Block B1 Output 1 is	ON ON OFF ON ON OFF ON
	PLACE VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY CHOOSE	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is RF CD Box Block B1 Output 1 is ODH Sensor 4XAS from 4XCB 2, 4 or 5 TP2 & TP4 in Div A	ON ON OFF ON ON OFF ON ON ON
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is RF CD Box Block B1 Output 1 is ODH Sensor 4XAS from 4XCB 2, 4 or 5 TP2 & TP4 in Div A ODH alarm is LCP sees Peer 9 Div A No Access light is	ON ON OFF ON ON ON ON ON ON
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div , B Div For 90 secs for RF Imminent Alarms to stop sounding LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is RF CD Box Block B1 Output 1 is ODH Sensor 4XAS from 4XCB 2, 4 or 5 TP2 & TP4 in Div A	ON ON OFF ON ON ON ON
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY VERIFY	ensor ODH alarm changes Mode 25 to Mode 1 and disables the Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div Bot Bot Bot Bot Bot Bot Bot Bot	ON OFF OFF ON ON ON ON ON OFF ON ON
	PLACE VERIFY VERIFY VERIFY WAIT VERIFY VERIFY VERIFY VERIFY CHOOSE JUMP VERIFY VERIFY VERIFY VERIFY	Peer 9 in No Access (Mode 25) LCP sees Peer 9 in No Access light: Div A and Div B LCP sees RF Haz light: Div A and Div B LCP sees NG Hware light: A Div B Div LCP sees NG Hware light: A Div B Div LCP sees NG Hware light: A Div B Div LCP sees NG Hware light: A Div B Div LCP sees RF CD#1 light is RF CD Box Block A1 Output 0 is RF CD Box Block B1 Output 0 is LCP sees RF CD#2 light is RF CD Box Block A1 Output 1 is RF CD Box Block B1 Output 1 is ODH Sensor 4XAS from 4XCB 2, 4 or 5 TP2 & TP4 in Div A ODH alarm is LCP sees Peer 9 Div A No Access light is LCP sees Div A RF Haz light is	ON OFF ON ON OFF ON ON ON OFF OFF OFF

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	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	ON
	VERIFY	LCP sees Div A NG Hware light is	ON
	REMOVE	Jumper from TP2 & TP4 in Div A	
	VERIFY	LCP sees Div A NG Hware light is	OFF
Ц	CYCLE	#16 Transfer Key (Turn OFF then ON)	OH
	VERIFY	LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY	LCP sees RF CD#2 light is	ON
	VERIFY	RF CD Box Block A1 Output 1 is	OFF
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	DI A CE		
_	PLACE	Peer 9 in No Access (Mode 25)	ON
	VERIFY	LCP sees Peer 9 in No Access light: Div A □ and Div B □	ON
	VERIFY	LCP sees RF Haz light: Div A □ and Div B □	ON
	VERIFY	LCP sees NG Hware light: A Div \Box , B Div \Box	OFF
	WAIT	For 90 secs for RF Imminent Alarms to stop sounding	
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	ON
	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	ON
	JUMP	TP2 & TP4 in Div B	
	VERIFY	ODH alarm is	ON
	VERIFY	LCP sees Peer 9 Div B No Access light is	OFF
	VERIFY	LCP sees Div A RF Haz light is	OFF
	VERIFY	LCP sees RF CD#1 light is	OFF
	VERIFY	RF CD Box Block A1 Output 0 is	ON
	VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY	LCP sees RF CD#2 light is	OFF
	VERIFY	RF CD Box Block A1 Output 1 is	ON
	VERIFY	RF CD Box Block B1 Output 1 is	OFF
	VERIFY	LCP sees Div B NG Hware light is	ON
	REMOVE	Jumper from TP2 & TP4 in Div B	
	VEDIEV	LCP sees Div B NG Hware light is	OFF
	VERIFY CYCLE	ě	OFF
		#16 Transfer Key (Turn OFF then ON) LCP sees Peer 9 in Safe Access	MODE 1
	VERIFY VERIFY	LCP sees RF CD#1 light is	ON
	VERIFY VERIFY	RF CD Box Block A1 Output 0 is	OFF
	VERIFY VERIFY	RF CD Box Block B1 Output 0 is	OFF
	VERIFY VERIFY	LCP sees RF CD#2 light is	OFF
Ц	, marit. I	LOI GOOD IN CIPIL IIGHT IS	011

		VERIFY	RF CD Box Block B1 Output 1 is	OFF	
	☐ Check for acceptance Test any 4XAS sensor ODH alarm changes Mode 25 to Mode 1 and disables the Critical Devices.				
1.9	Te	st any Non-4	XAS sensor ODH alarm in zone 4Z1 affects Mode 25 and the Cri	tical Devices.	
		PLACE	Peer 9 in No Access (Mode 25)		
		VERIFY	LCP sees Peer 9 in No Access light: Div A \square and Div B \square	ON	
		VERIFY	LCP sees RF Haz light: Div A \square and Div B \square	ON	
		VERIFY	LCP sees NG Hware light: A Div \square , B Div \square	OFF	
		WAIT	For 90 secs for RF Imminent Alarms to stop sounding		
		VERIFY	LCP sees RF CD#1 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 0 is	ON	
		VERIFY	RF CD Box Block B1 Output 0 is	ON	
		VERIFY	LCP sees RF CD#2 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 1 is	ON	
		VERIFY	RF CD Box Block B1 Output 1 is	ON	
		CHOOSE	ODH Sensor 3AS from 3CB \square 2 or \square 4		
		JUMP	TP2 & TP4 in Div A		
		VERIFY	ODH alarm is	ON	
		VERIFY	LCP sees Peer 9 Div A No Access light is	OFF	
		VERIFY	LCP sees Div A RF Haz light is	OFF	
		VERIFY	LCP sees RF CD#1 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 0 is	OFF	
		VERIFY	RF CD Box Block B1 Output 0 is	ON	
		VERIFY	LCP sees RF CD#2 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 1 is	OFF	
		VERIFY	RF CD Box Block B1 Output 1 is	ON	
		VERIFY	LCP sees Div A NG Hware light is	OFF	
		REMOVE	Jumper from TP2 & TP4 in Div A		
		VERIFY	LCP sees Peer 9 No Access light: Div A	OFF	
		VERIFY	LCP sees Peer 9 No Access light: Div B	ON	
		VERIFY	LCP sees RF Haz light: Div A	OFF	
		VERIFY	LCP sees RF Haz light: Div B	ON	
		VERIFY	LCP sees Div A NG Hware light is	OFF	
		VERIFY	LCP sees RF CD#1 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 0 is	ON	
		VERIFY	RF CD Box Block B1 Output 0 is	ON	
		VERIFY	LCP sees RF CD#2 light is	OFF	
		VERIFY	RF CD Box Block A1 Output 1 is	ON	
		VERIFY	RF CD Box Block B1 Output 1 is	ON	
		JUMP	TP2 & TP4 in Div B		

☐ VERIFY RF CD Box Block A1 Output 1 is

OFF

	VERIFY	ODH alarm is			ON
	VERIFY	LCP sees Peer 9 Div B No Access light is			OFF
	VERIFY	LCP sees Div B RF Haz light is			OFF
	VERIFY	LCP sees RF CD#1 light is			OFF
	VERIFY	RF CD Box Block A1 Output 0 is			ON
	VERIFY	RF CD Box Block B1 Output 0 is			OFF
	VERIFY	LCP sees RF CD#2 light is			OFF
	VERIFY	RF CD Box Block A1 Output 1 is			ON
	VERIFY	RF CD Box Block B1 Output 1 is			OFF
	VERIFY	LCP sees Div B NG Hware light is			ON
	REMOVE	Jumper from TP2 & TP4 in Div B			
	VERIFY	LCP sees Peer 9 in No Access light: Div A			ON
	VERIFY	LCP sees Peer 9 in No Access light: Div B			OFF
	VERIFY	LCP sees RF Haz light: Div A			ON
	VERIFY	LCP sees RF Haz light: Div B			OFF
	VERIFY	LCP sees Div B NG Hware light is			OFF
	VERIFY	LCP sees RF CD#1 light is			OFF
	VERIFY	RF CD Box Block A1 Output 0 is			ON
	VERIFY	RF CD Box Block B1 Output 0 is			OFF
	VERIFY	LCP sees RF CD#2 light is			OFF
	VERIFY	RF CD Box Block A1 Output 1 is			ON
	VERIFY	RF CD Box Block B1 Output 1 is			OFF
	PLACE	Peer 9 in Restricted Access (Mode 9)			
	VERIFY	LCP sees Peer 9 in Restricted Access			MODE 9
	Check for a the Critical	occeptance Test any Non-4XAS sensor ODH alarm i Devices.	n zone 42	Z1affect	ts Mode 25 an
		END OF TEST PROCEDU	RE		
Sigr	ı for completi	on of initial testing:			
			Date:		
				- -	
Sigr	for complet	ion of final testing:			
			D-4	,	,
			Date:	/	/

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